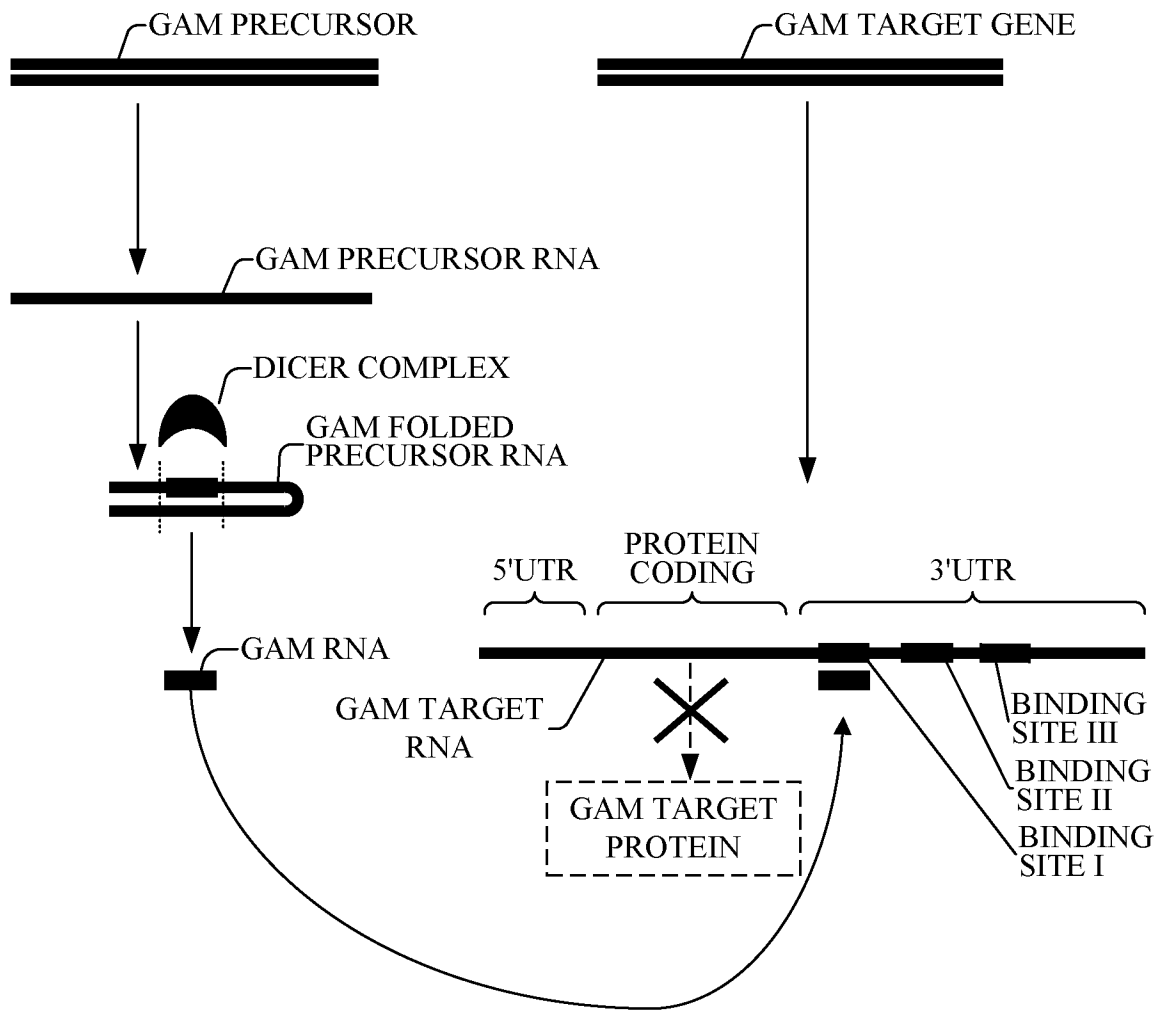
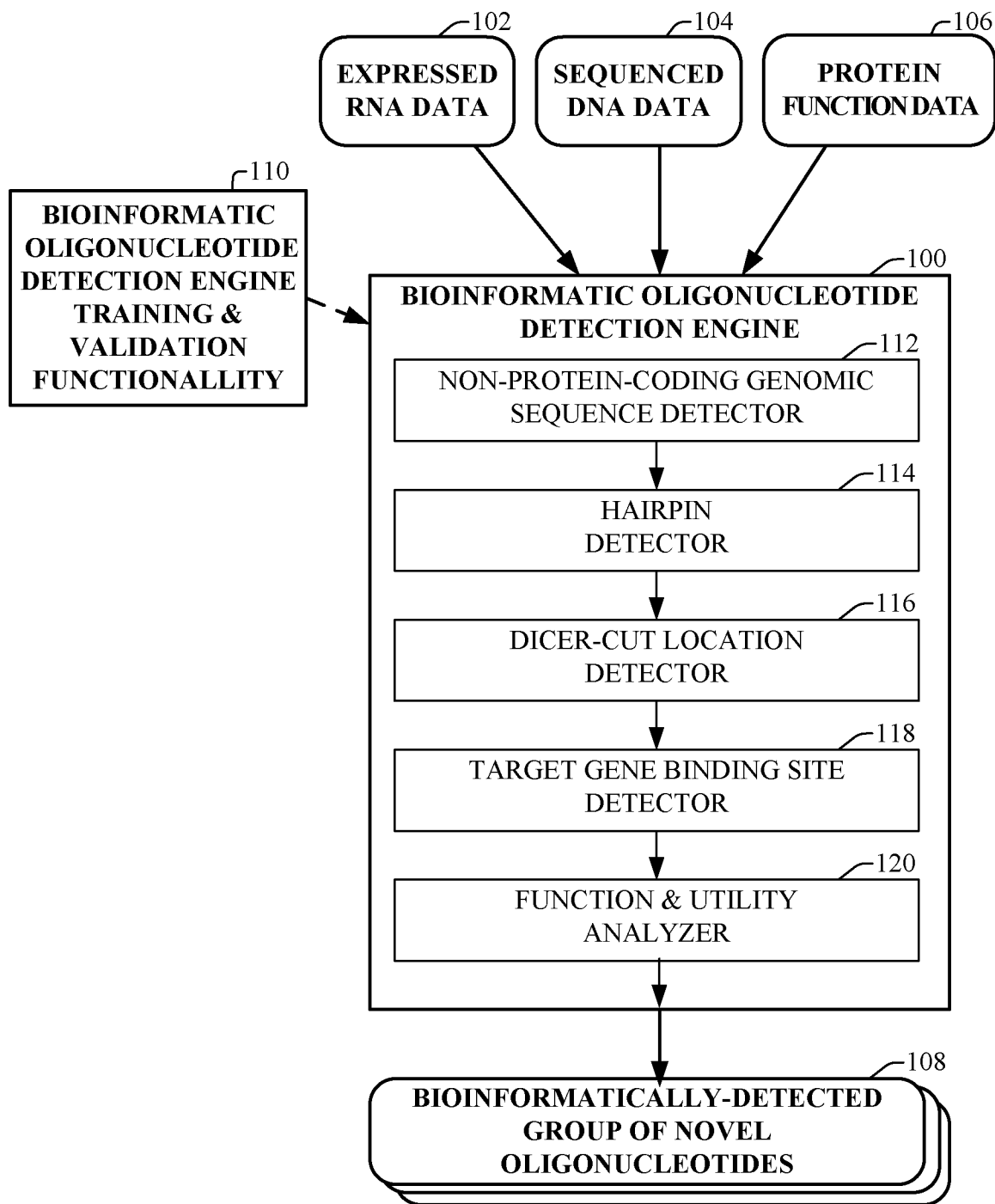


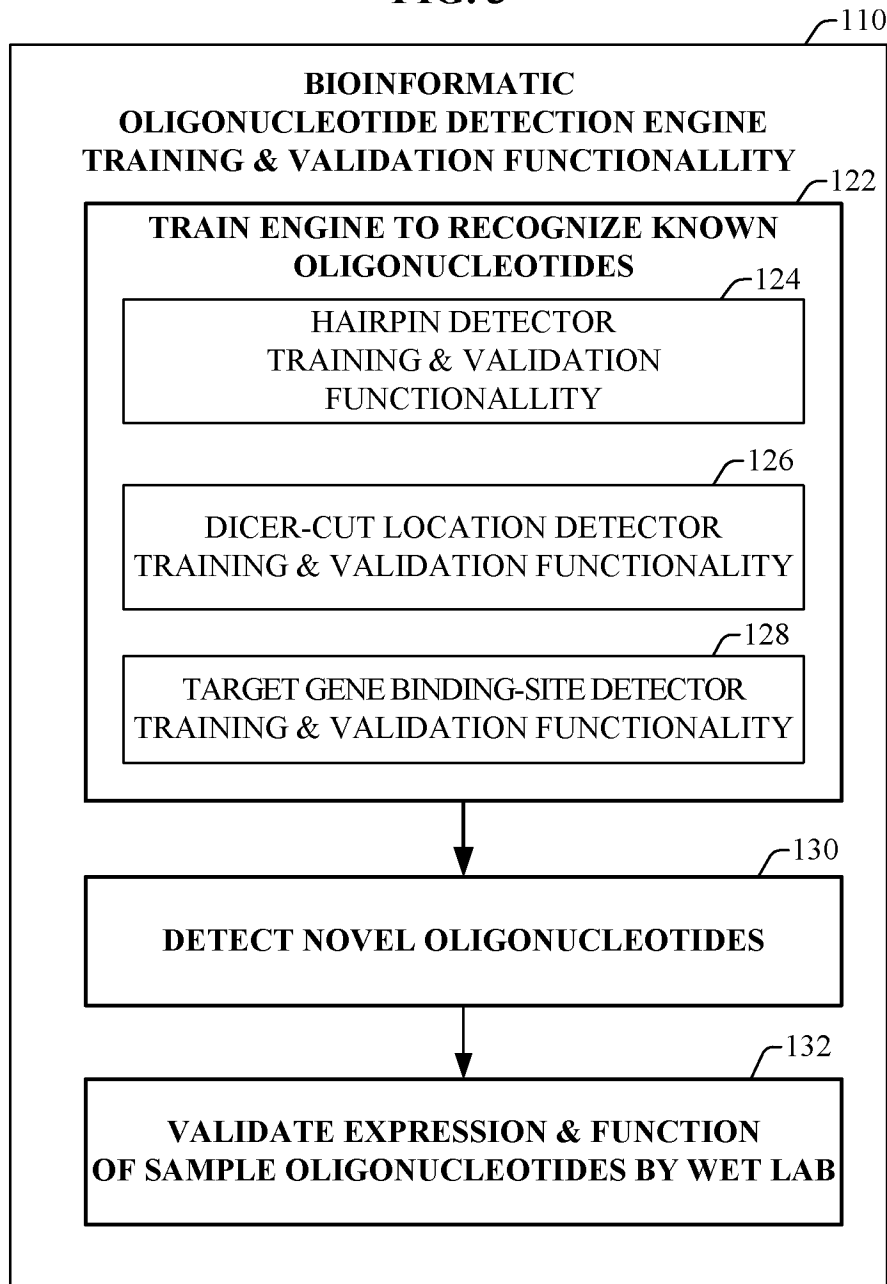
**FIG. 1**



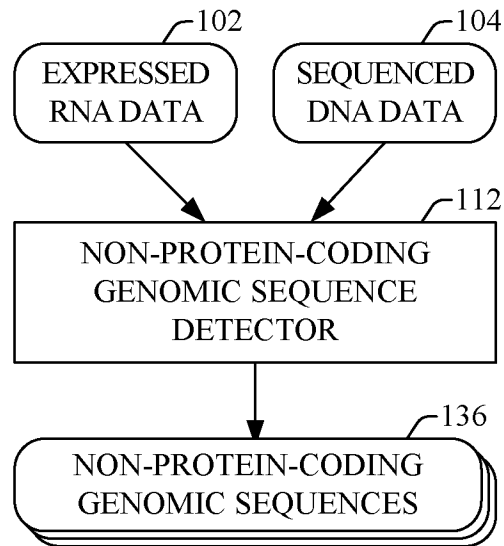
**FIG. 2**



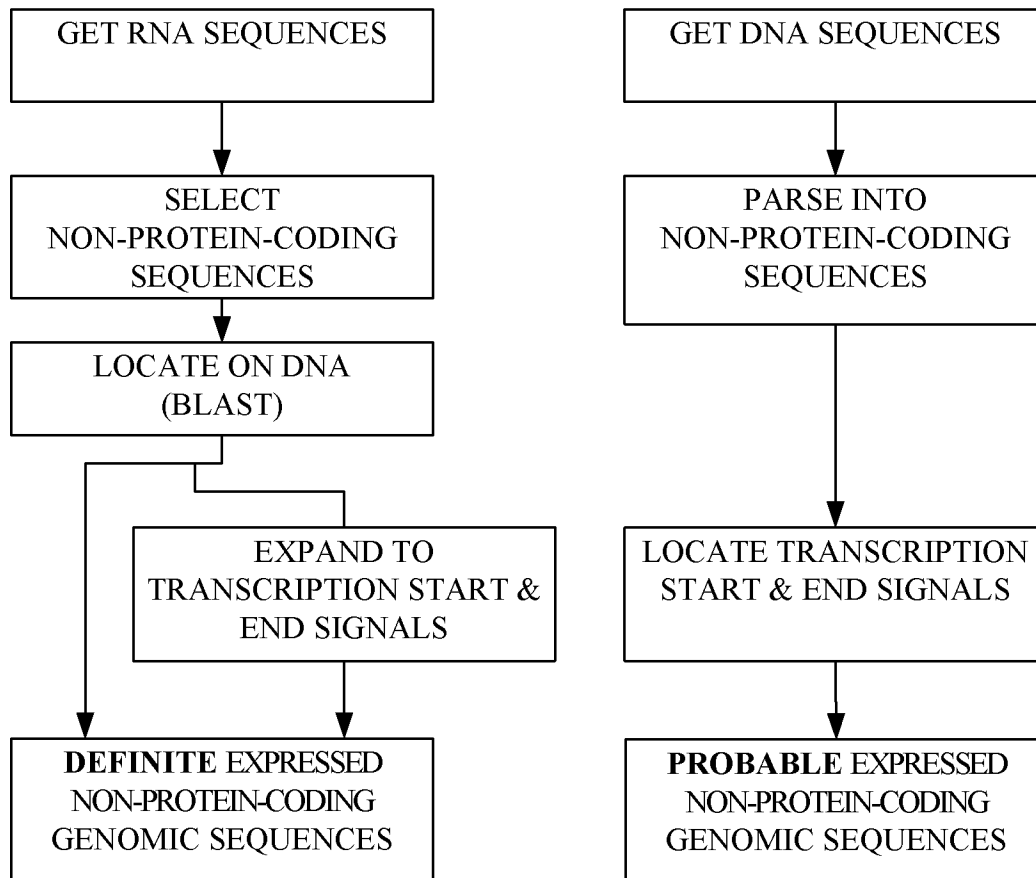
**FIG. 3**



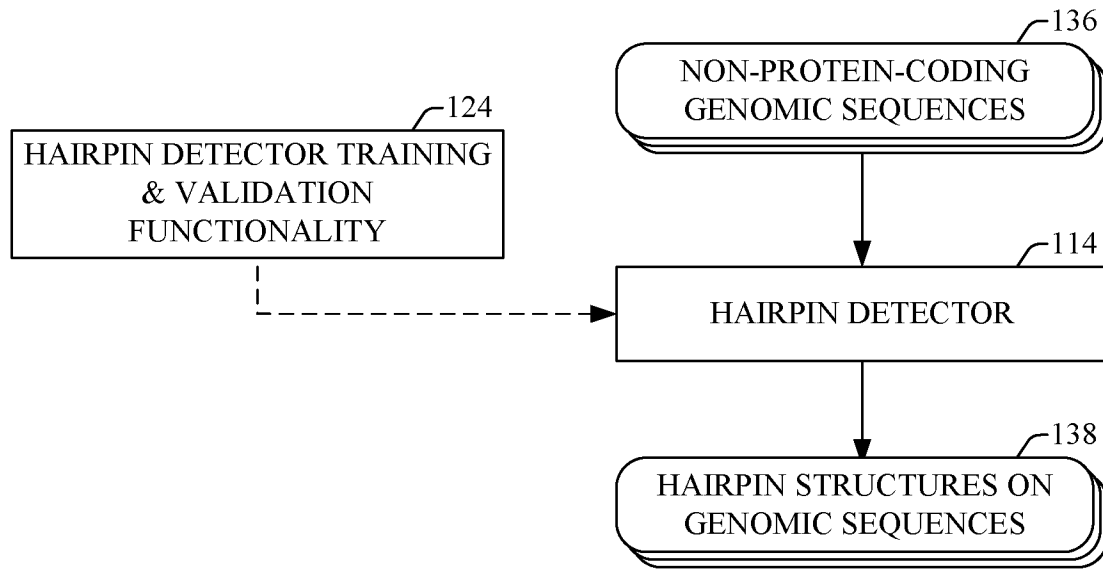
**FIG. 4A**



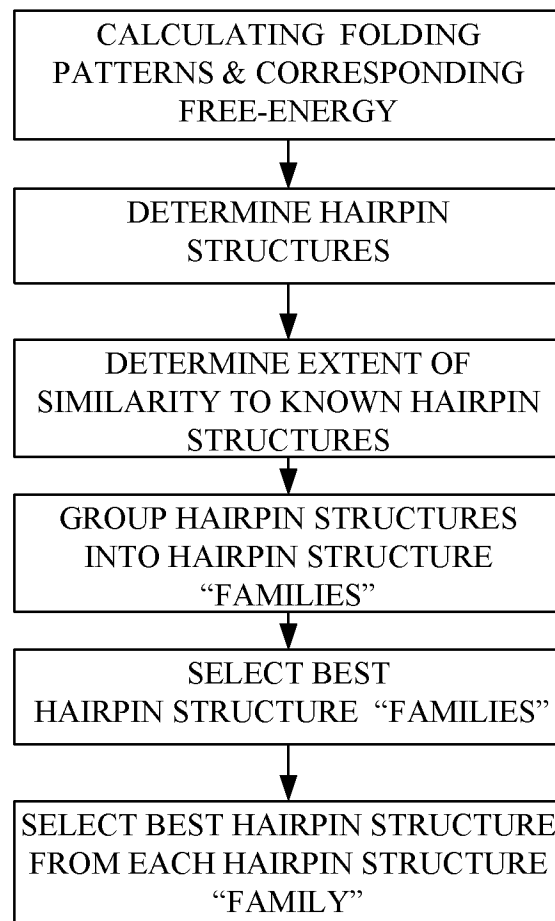
**FIG. 4B**



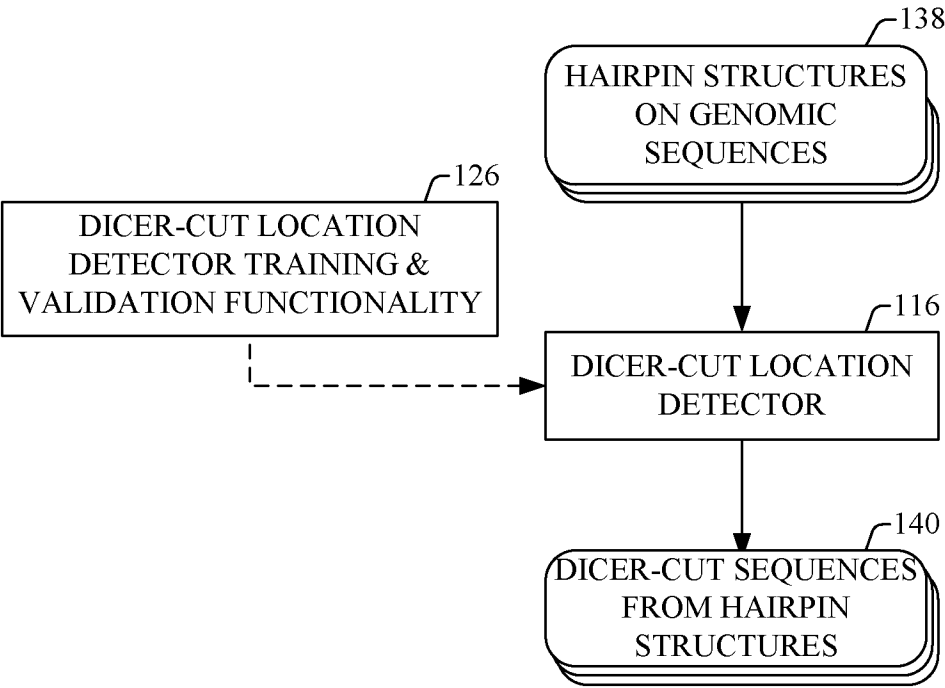
**FIG. 5A**



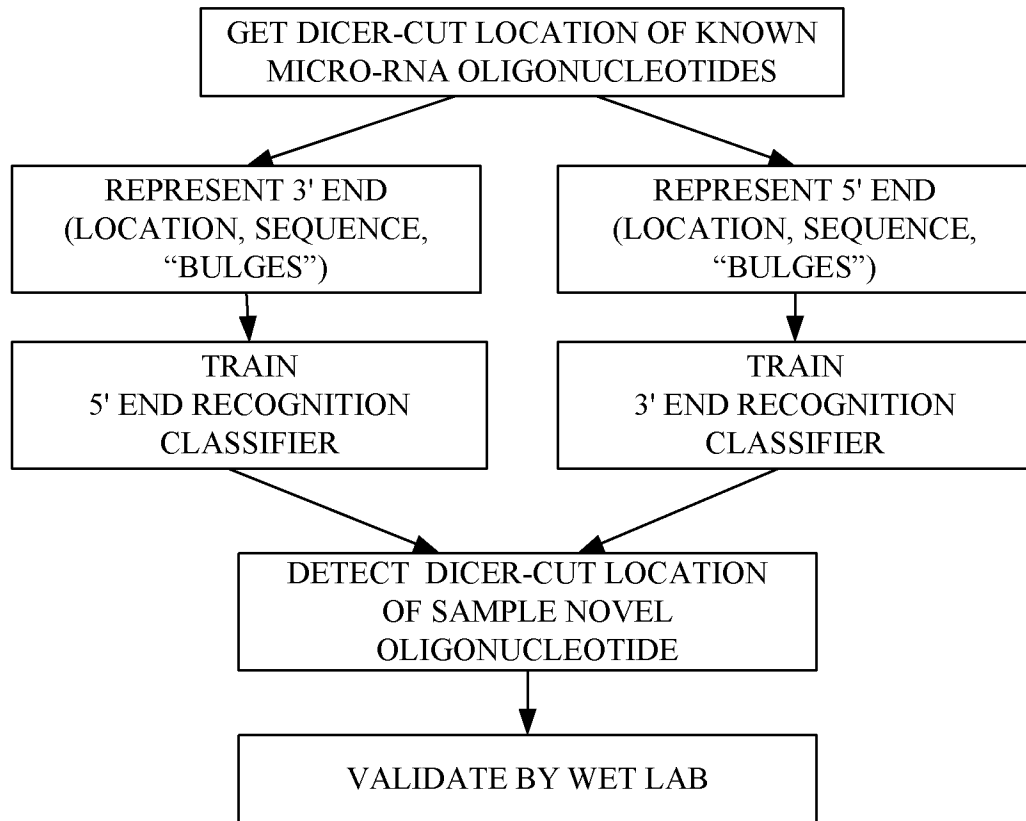
**FIG. 5B**



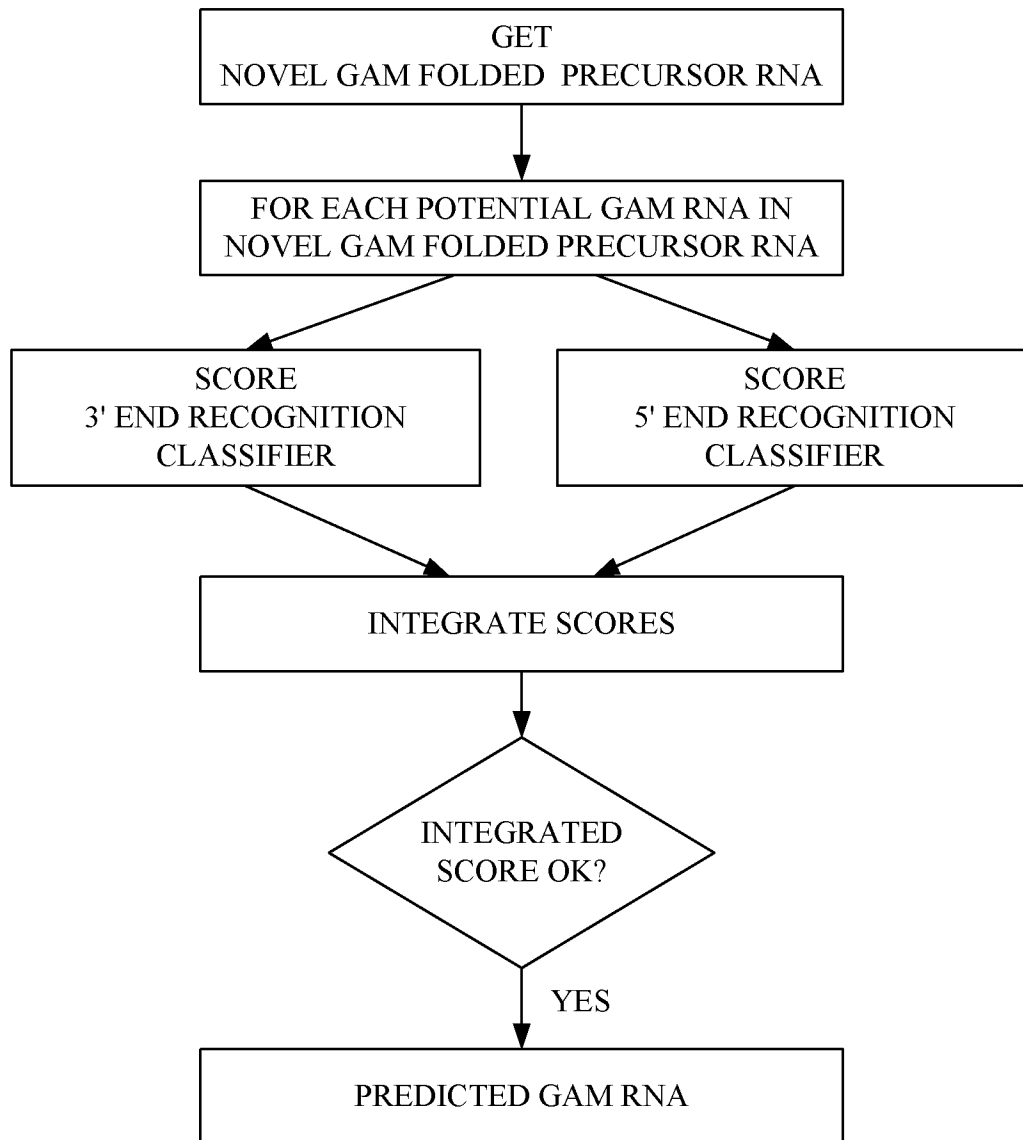
**FIG. 6A**



**FIG. 6B**

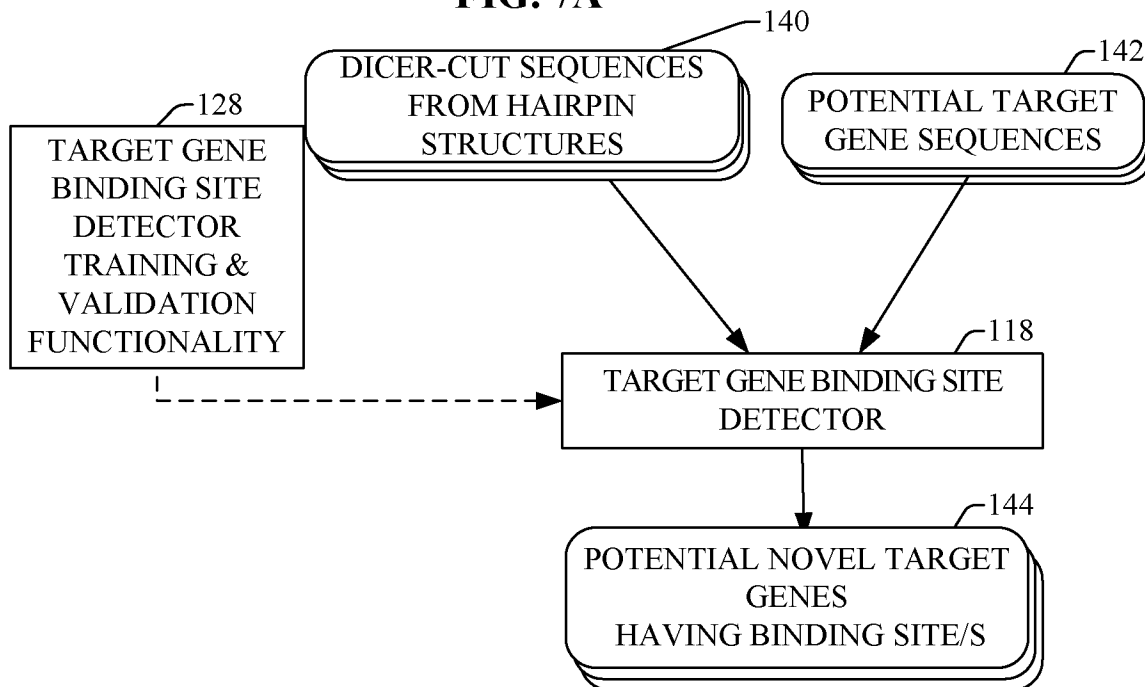


**FIG. 6C**

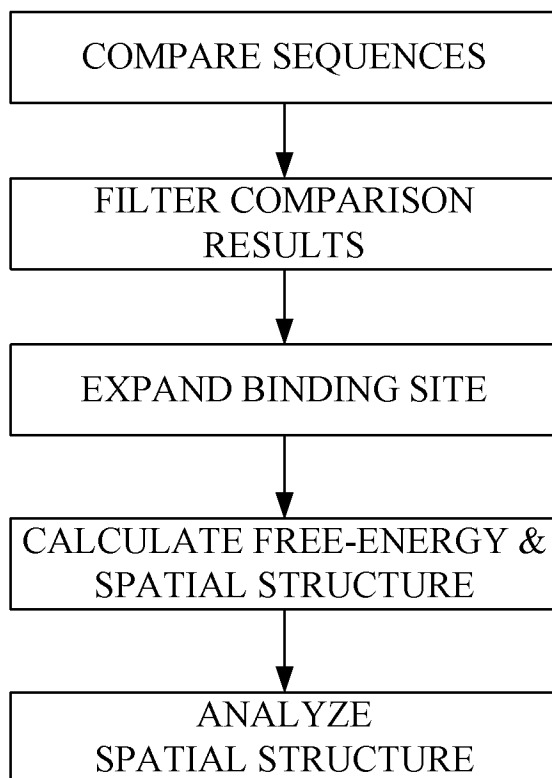




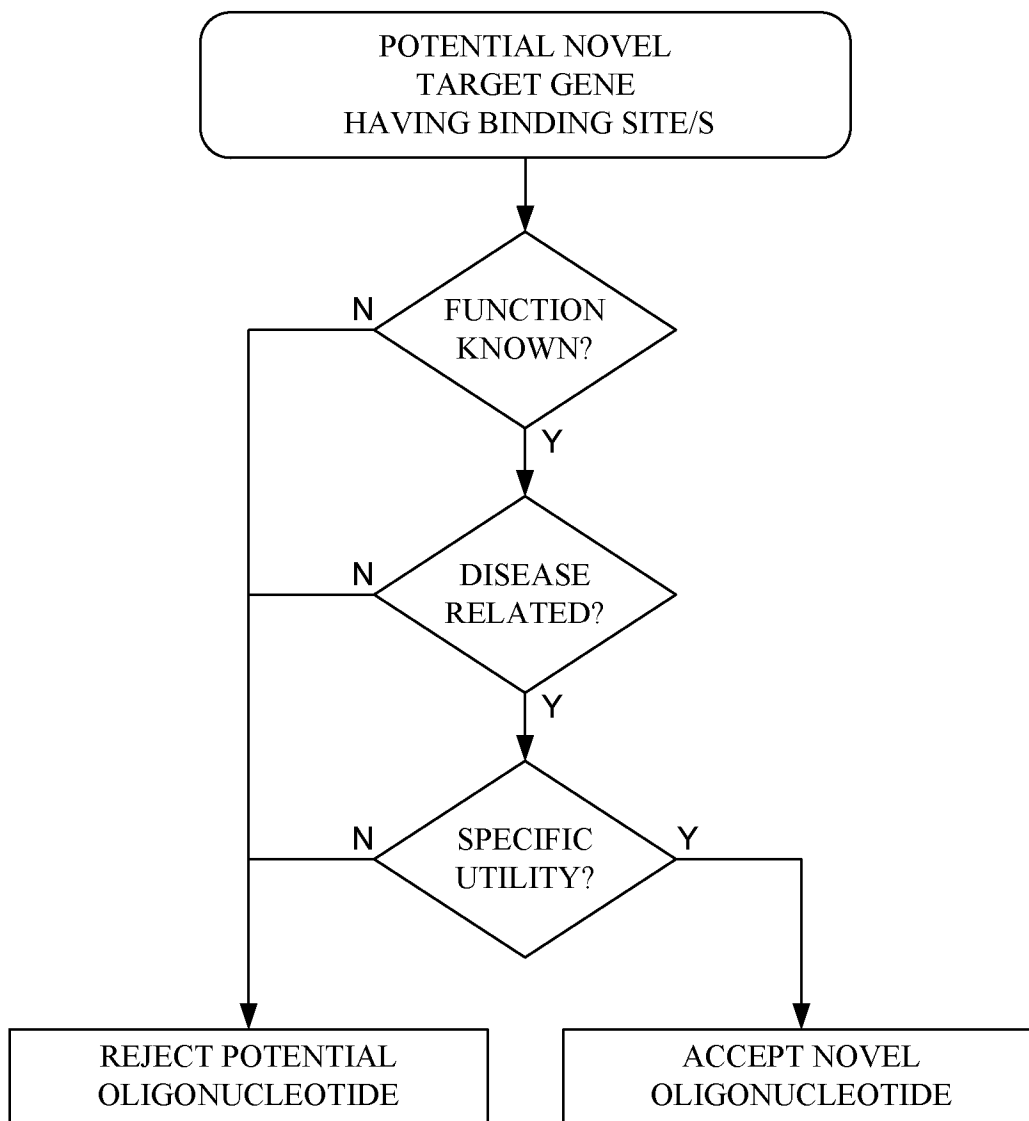
**FIG. 7A**



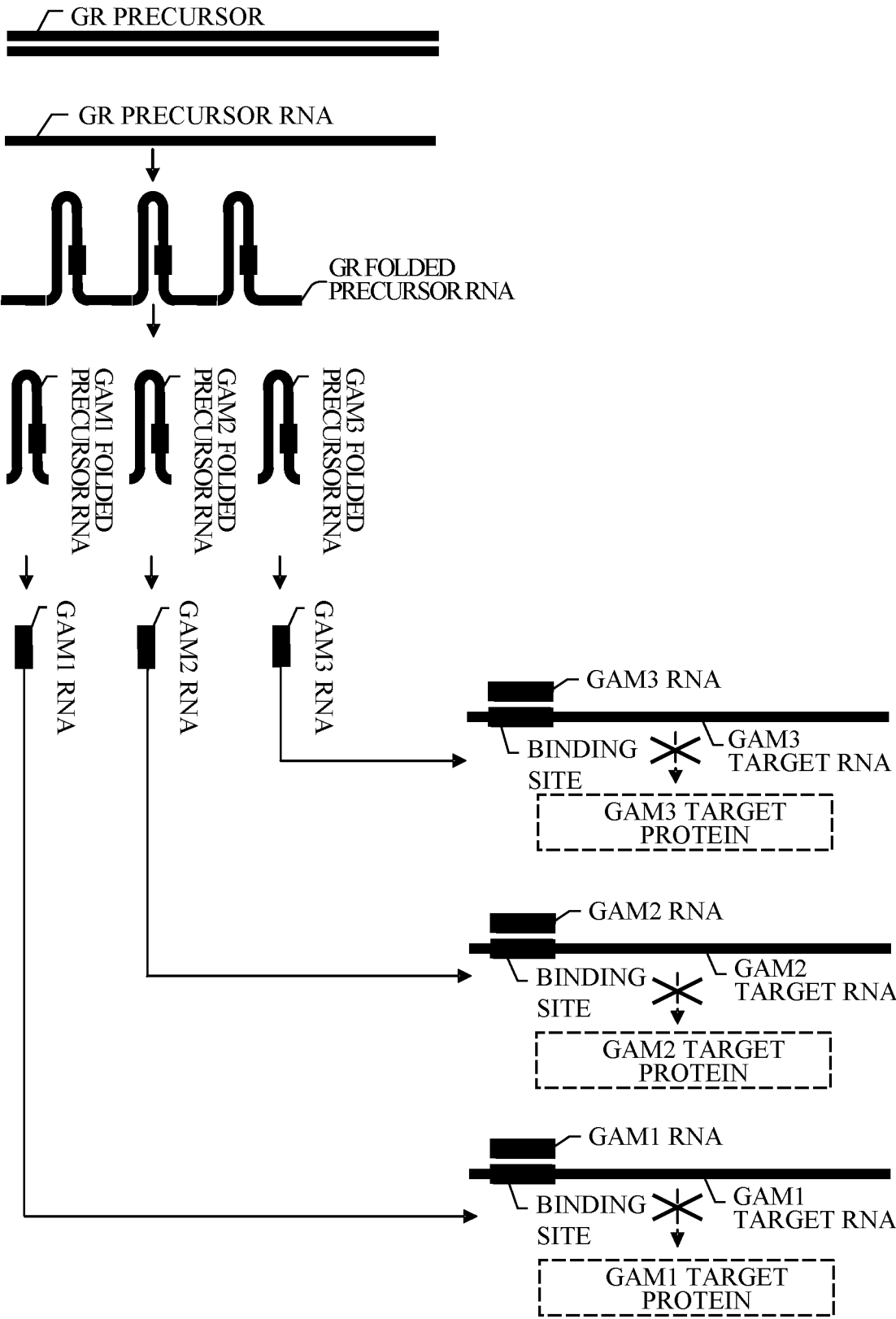
**FIG. 7B**



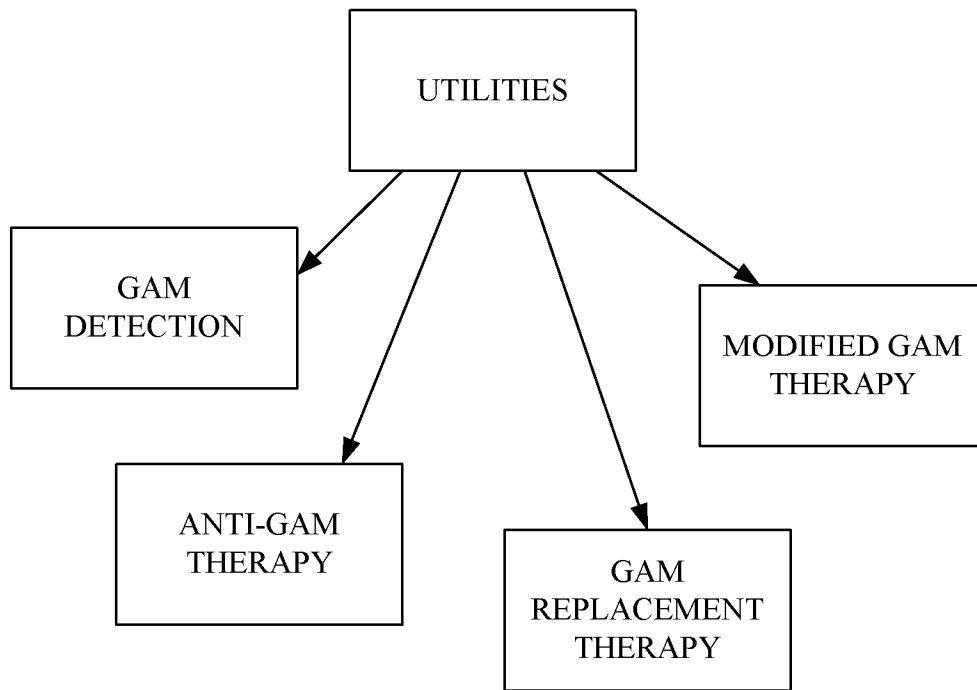
**FIG. 8**



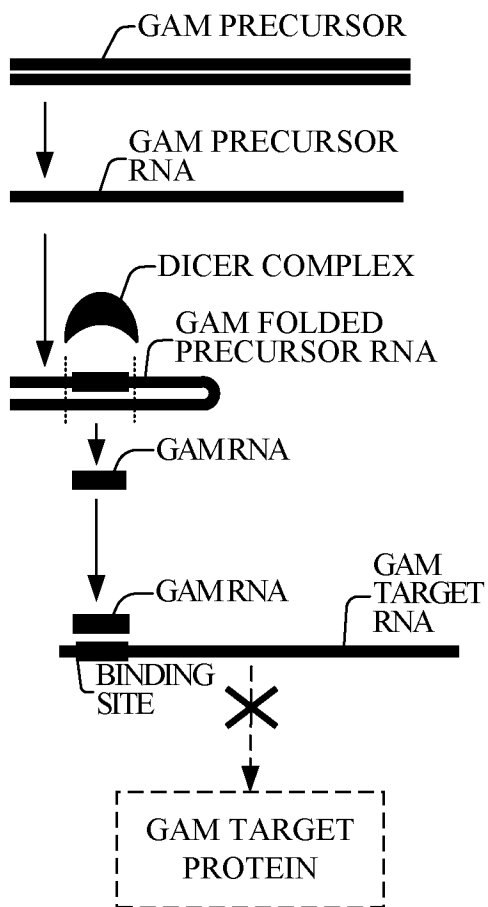
**FIG. 9**



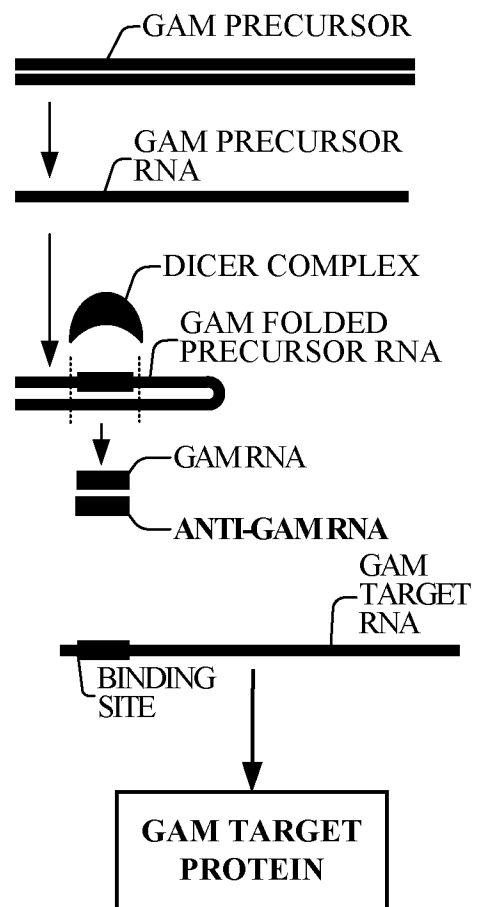
**FIG. 10**



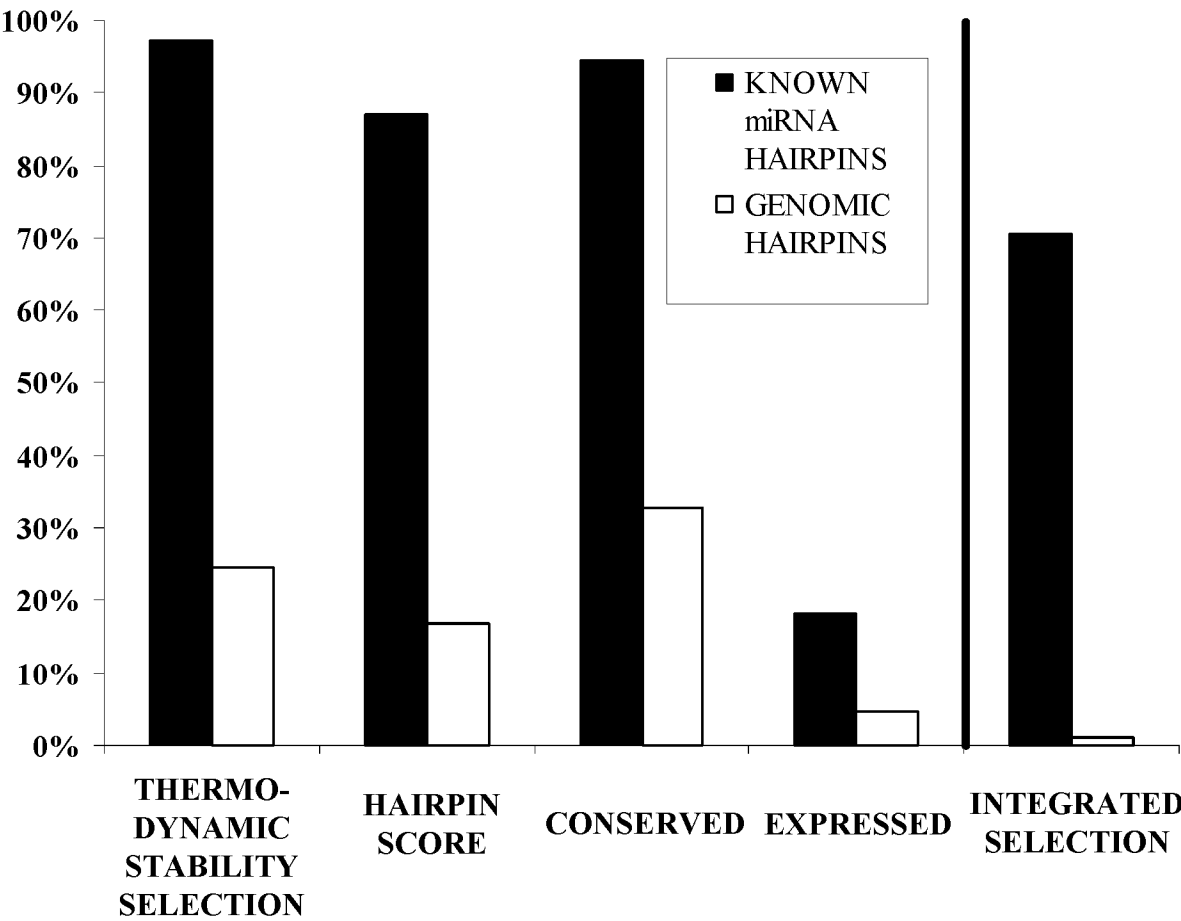
**FIG. 11A**



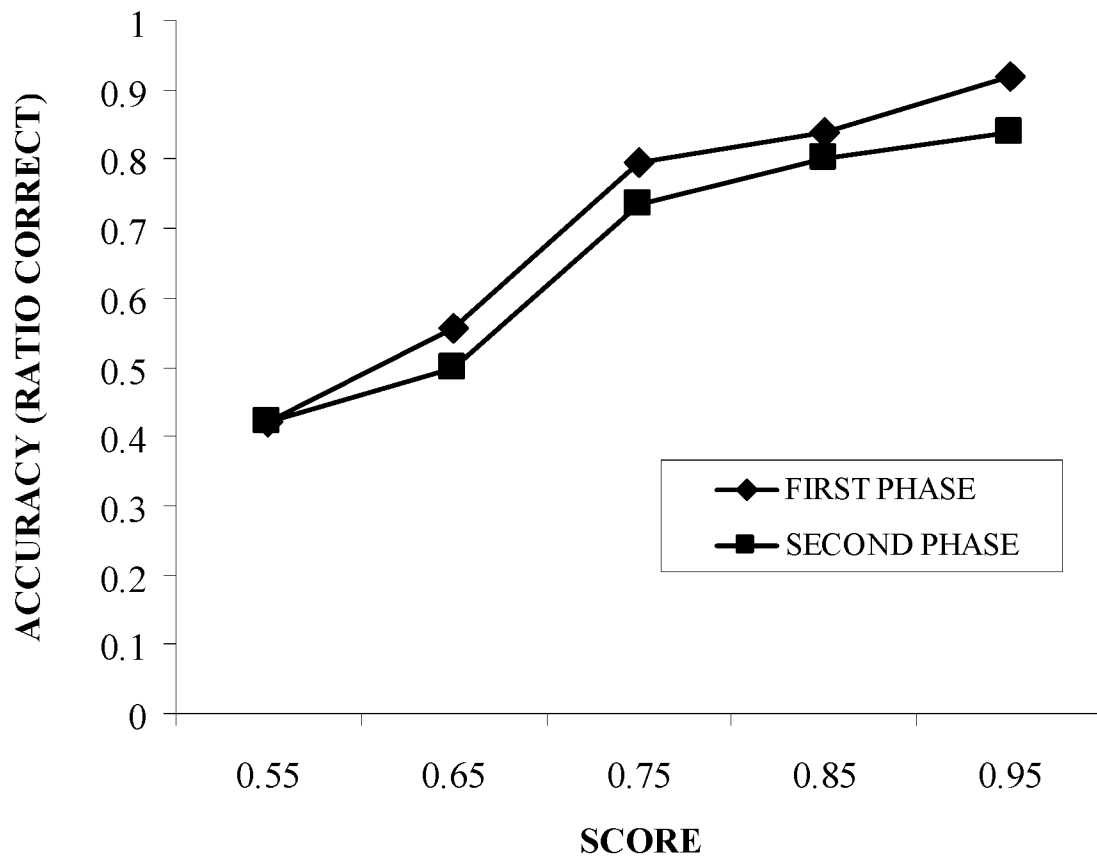
**FIG. 11B**



**FIG. 12A**



**FIG. 12B**



**FIG. 12C**

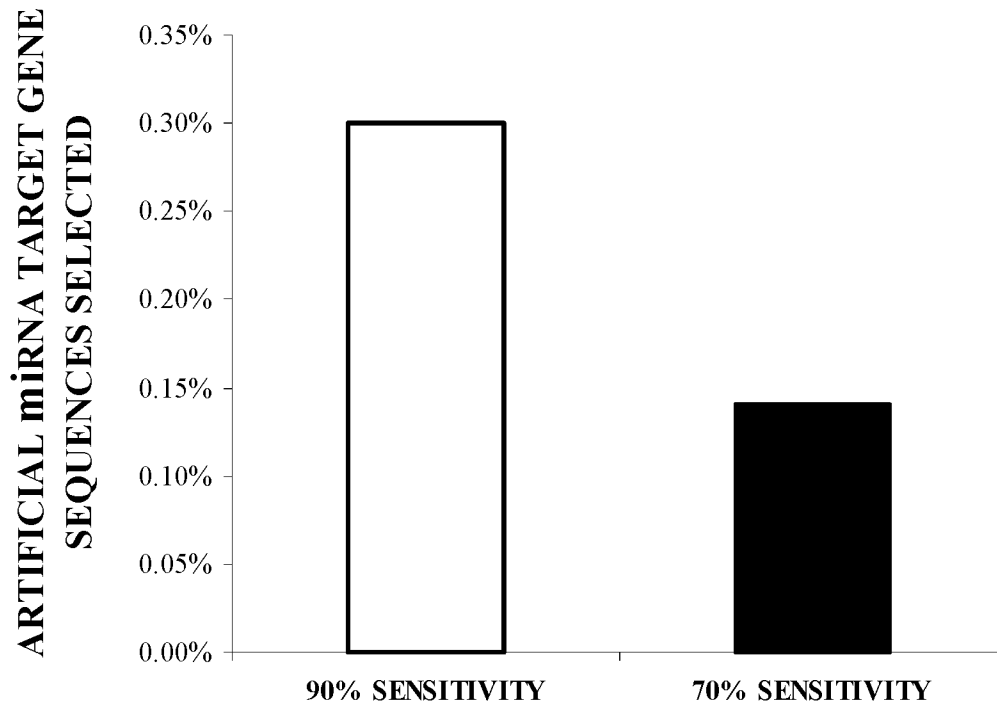




FIG. 13

ROW	PRIMER SEQUENCE	SEQUENCED SEQUENCE	PREDICTEDGAM RNA	DIST- ANCE	GAM NAME
1*	AATTGCTTGAAC	CCAGGAAGTGGA	AATTGCTTGAACCCAGGAAGTGGA	0	25-A
2*	ACTGCACCTCC	AGCCTGGGC	ACTGCACCTCCAGCCTGGGCTAC	0	351661-A
3	CACTGCACCTC	CAGCCCGAGCAACA	CACTGCACCTCCAGCCCGAGCAA	0	351946-A
4	CTAGACTGAAG	CTCCTTGAGGAC	CTAGACTGAAGCTCCTTGAGGA	0	352759-A
5	GAAGTTTGAAG	CCTGTTGTTCA	GAAGTTTGAAGCCTGTTGTTCA	0	4426-A
6	TCACCTGCAAC	CTCCACCA	(TCACTGCAACCTCCACCACGTG),(TC ACTGCAACCTCCACCAAGCCT)	0	(357950- A),(352721-A)
7*	TCTAAGAGAAAG	GAAGTTCAGA	TCTAAGAGAAAGGAAGTTCAGA	0	337950-A
8	GGGCAGTGGA	GCTGGAA	GGGCGTGAGCTGGAATGATGT	1	351996-A
9	AATTGCTTGAAC	CCAAGAAGTGGA	AATCAGTTGAACCCAGAAGAGTG	2	351874-A
10	AGCAGCCCCA	GGGTTTGT	AGCAAGACCAGGGTTTGTGTT	2	352083-A
11	AGGCAAGACG	GACCAGA	AGGCAGAGAGGAGCCAGAGACT	2	351944-A
12	AGGAAAGAAT	TAATGTGAA	GGGAAATAATTAATGTGAAGTC	2	353325-A
13	AGGAAAGAAT	TAATGTGAG	AGGAAAAAATAATTAATGTGAGTC	2	352649-A
14	ATTCAGTTG	CCCATGTTT	(ATTGTTGCCCATGTTTTATT), (TATTCATTGCCCATGTTTGTA)	2	A),(352957- A,352960-A)
15	CTAGACTGAAG	CTCCTTGAGG	CTGGACTGAGCTCCTTGAGGCC	2	352288-A
16	TTCAGAGTGGT	TAAGTCTG	TTCTGATGGTTAAGTTCGTCA	2	353875-A
17	TTCAGAGTGGT	TAAGTCTGC	TTCAAGTGTTAAGTTCGTCTT	2	351940-A
18	AGCAGCCCA	GAAAGGAAGC	AGGCCAAGAAAGGAAGCAGAGG	3	352496-A
19	AGTTTGCCTTG	TAAGAAAAAG	AGTTTGTGTAAGAAAAAGC	3	352518-A
20	ATCAGAGGGTG	GGTGCTAA	ATTAGGAGAGTGGGTGCTAAGT	3	352511-A
21	ATGGTGGGAG	AGTTTGTCACT	TGGAGGAGAGTTTGTCACTATAG	3	353484-A
22	CCCAGGAAG	TGGAGCCTGGGC	CCCGGGTGGAAGCCTGGGCTGTG	3	351990-A
23	GGGCAGTGGA	GGTCCGT	AGGGCAGGAGGTCGCTCCCTTC	3	353880-A
24	GGGCAGTGGA	TCTAGAC	GTGACAGTGAATCTAGACAGAGAC	3	352810-A
25	TCAAGCTCATTT	CACTAAA	CTCAGCTCATCCACTAAATCCC	3	353184-A
26	TGAAAAAGTT	GGTTGTATGGTT	GGAATGCTGGTTGTATGGTTG	3	353855-A
27	TGGAGAGTT	CCATATTTTG	TGATAGATCATATTTTGTAA	3	352004-A
28	TGGAGAGTT	GTTTGTACAGT	TGGGTTTTGTTTGTACAGTGA	3	353160-A
29	TCACCTGCAAC	CTCCACC	TCACCTGCAACCTCCACCTTCCG	0	353856-A

FIG. 14A



FIG. 14B

N2

```

      G A CAGT C--- G C--- CC
5' CCC TG GGAA GGC GGGATT TC CAGGG CCCCTT \
3' GGG AC CCTT CCG CCTGA AG GTCCT GGGGGA A
      - - - - - AAAC G TTCA CCA CG
  
```

N3

```

      AC- TA ACA - - - - - AG
5' CTC CTGTTTGC GCATA GGC GTG AAGG CGGC T
3' GGG GACAGACG TGTGT CCG CCG TTCC GCCG G
      CAC - - GAC AAGG C TGCG CT
  
```

MIR23

```

      - - C GTGACT
5' TGG GTTCCTGGCA TG TGATTT T
3' ACC TAGGGACCGT AC ACTAAA A
      AT T - ATTAGA
  
```

GAM7617

```

      - CACT - - - - - T A ACA - - - G- - - - - -GG
5' GGTCG CGCT GCA GAT GG GA GGT GCATCT C TAGCT CTTCTTT A
3' CCACT GCGA CGT CTG CC CT CCA CGTAGA G GTCGA GAAGAAA A
      A CC- - ATTTATTCC - A GG- CT A GA CCACC ACA
  
```

GAM252

```

      AACA ATTG TGAT T
5' TCTCT AGGTGCAGAGCTTAGCTG GTGAACAG TGG \
3' AGAGA FCCACGTCTTGAATCGGT CACTTGT GCC T
      AG- GA- - TC- - T
  
```

N4

```

      GGGA G AGCGC G A TT G
5' TG CA TTAAGTTGG TG GGCAG GGCAG GCT A
3' GC GT GGTTOGACT AC TCGTC CCGC CCG C
      - - - G GAC- - - G G - - G
  
```

N0

```

5' GGTCAAATGTATTGAAAGTTGCAAAAATCTTCTTACAAA
3' AAACAAAACCAATGCATCACCTAAGTOGTGTGAAATCA
  
```

N6

```

      TG - - C - - GG T G T
5' GGCTG A GCGGG GGGG CG GC TTCGGAG AGC C
3' CTGAC T TGTCT TCTC GT CG GGGTCTT TTG C
      GT TA C AA GG C G T
  
```

MIR24

```

      G G A TA TCTCAT
5' CTC GT CCT CTGAGCTGA TCAGT \
3' GAGG CA GGA GACTTGACT GGTCA C- CACATT
      A A C
  
```

N7

```

      - AT T AAA AG - - - T
5' TAGC AGCT TGTG ACGC GCCTG TACA GCC TG C G
3' GTCG TCGG ACAC TCGG CCGAC GTGT CCG AC G G
      C C- - AC- GA GCAC T T T
  
```

FIG. 14C

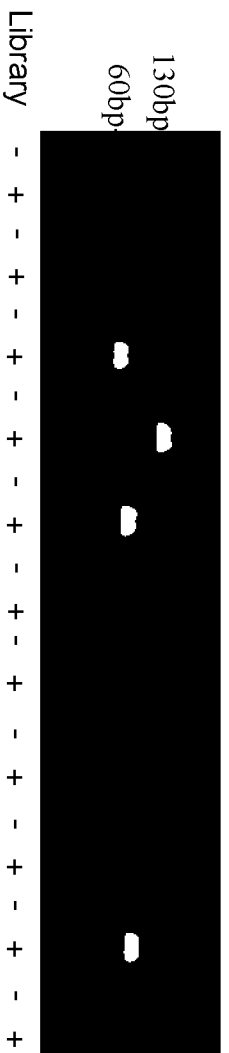




FIG. 15C

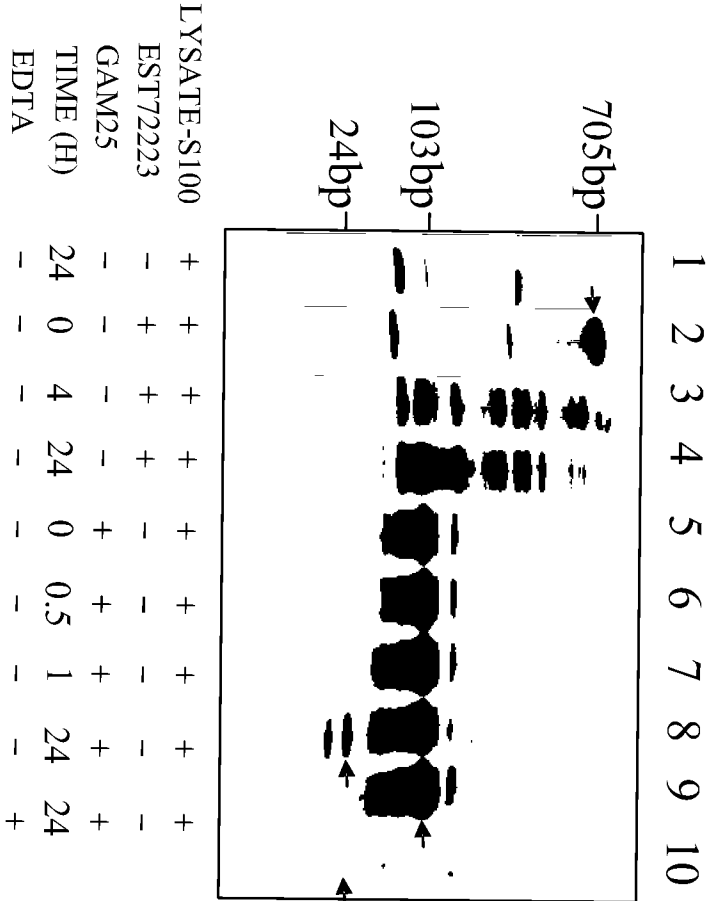
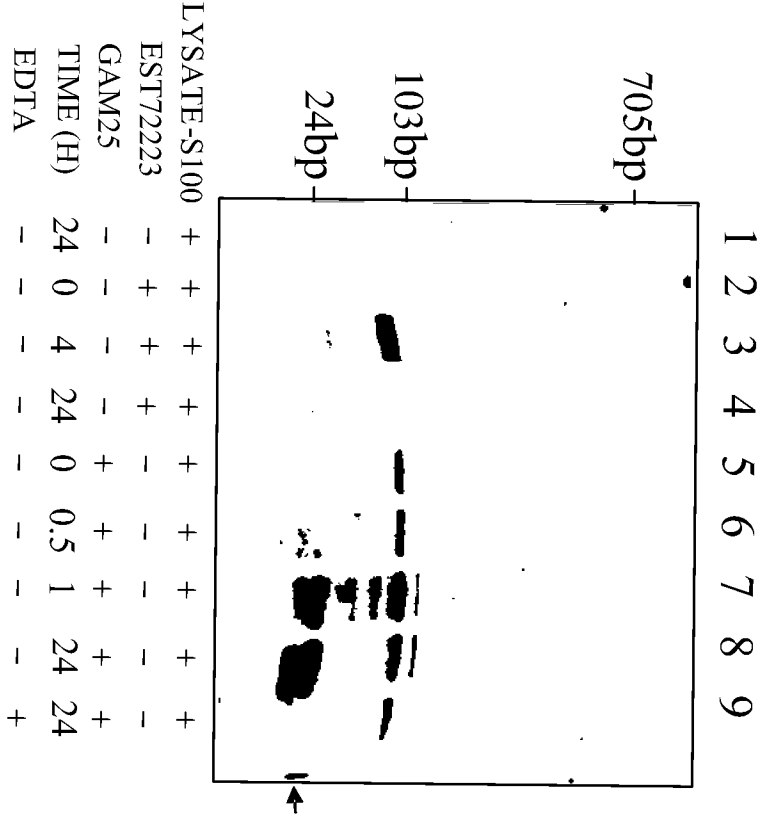
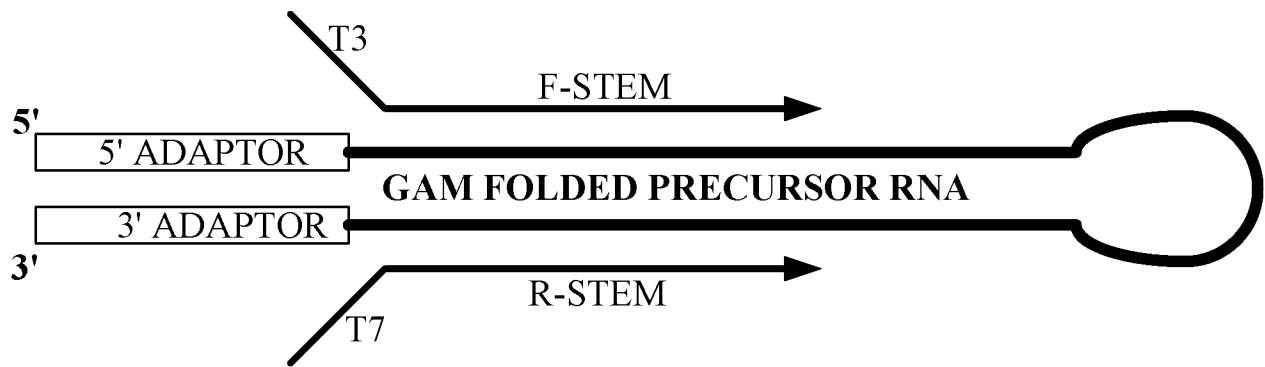


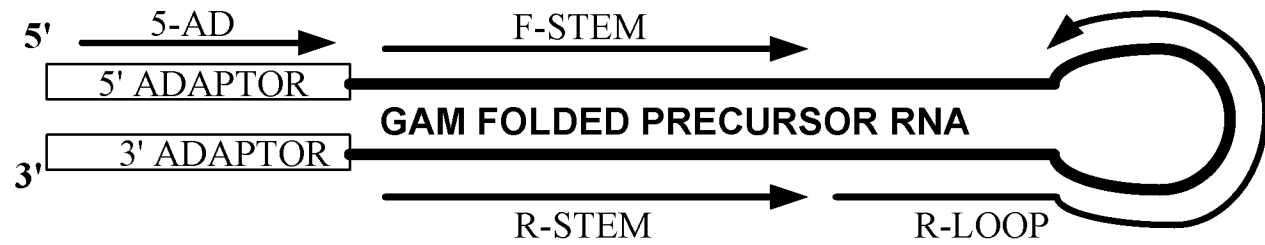
FIG. 15D



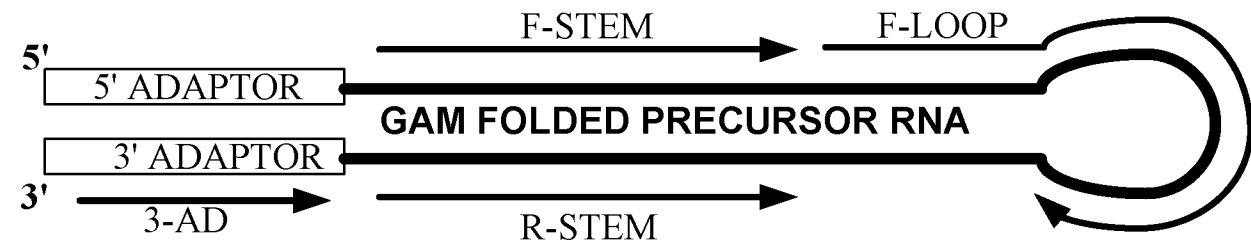
**FIG. 16A**



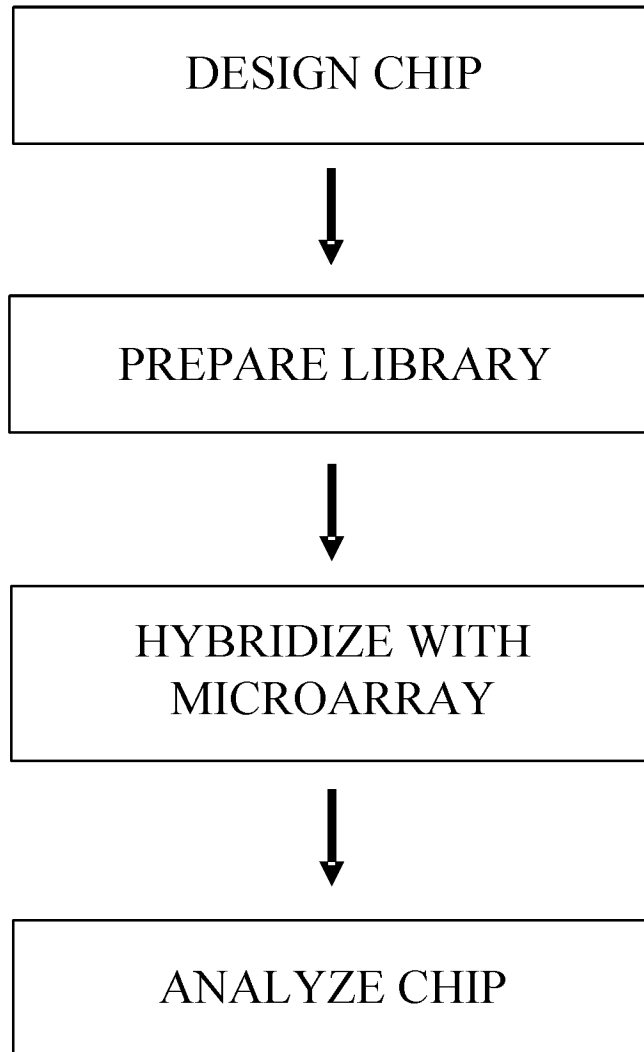
**FIG. 16B**



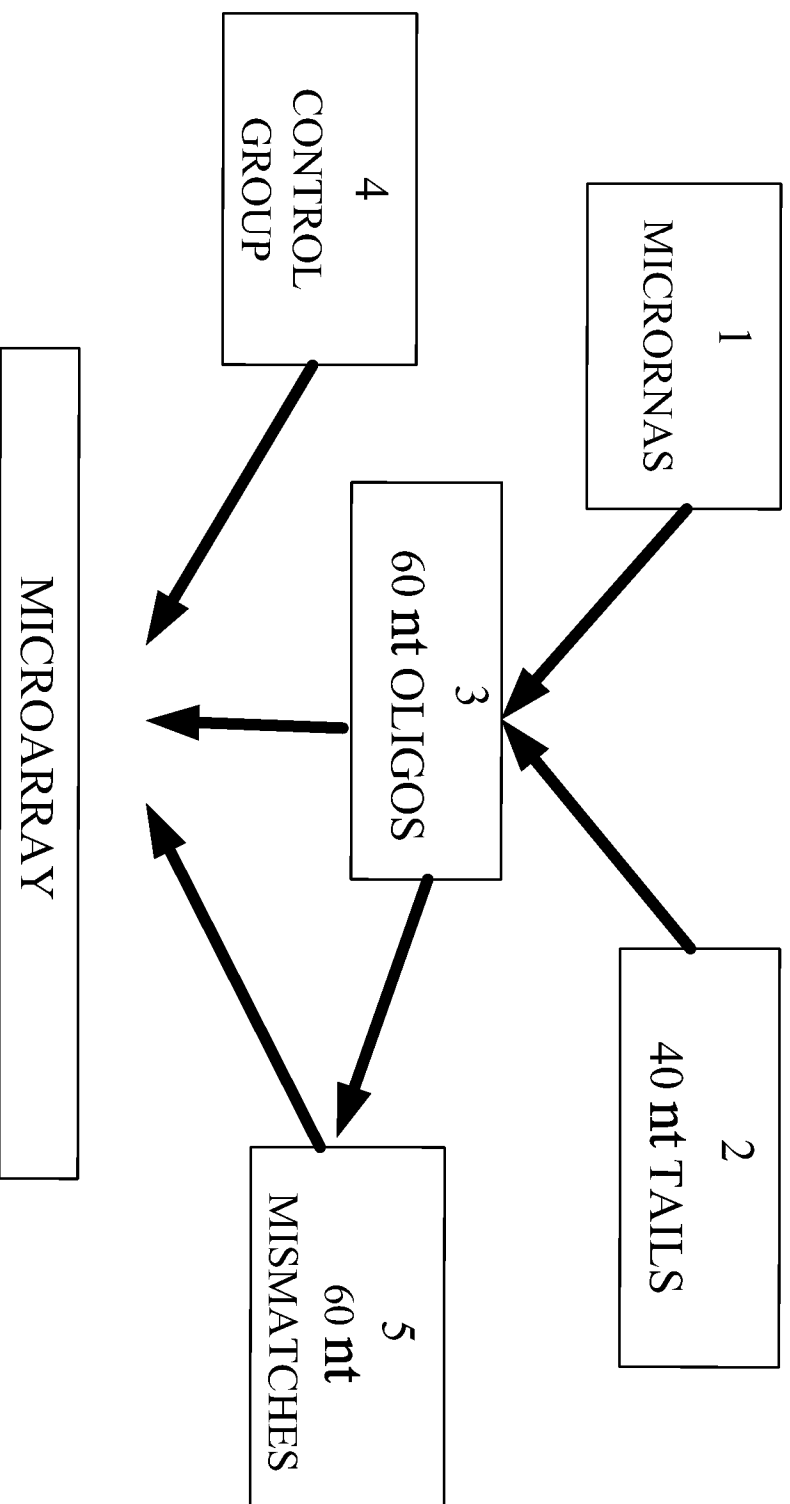
**FIG. 16C**



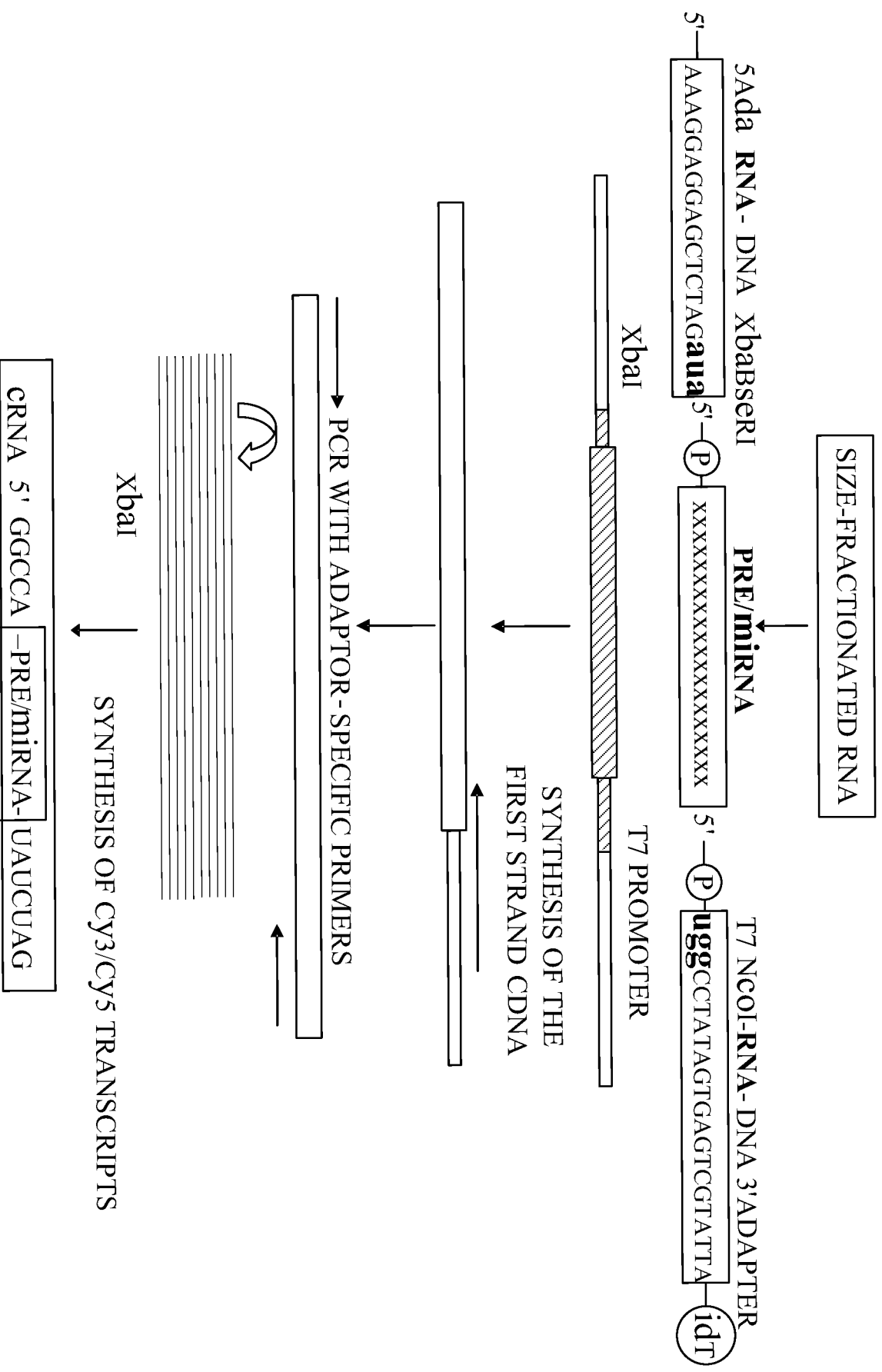
**FIG. 17A**



**FIG. 17B**

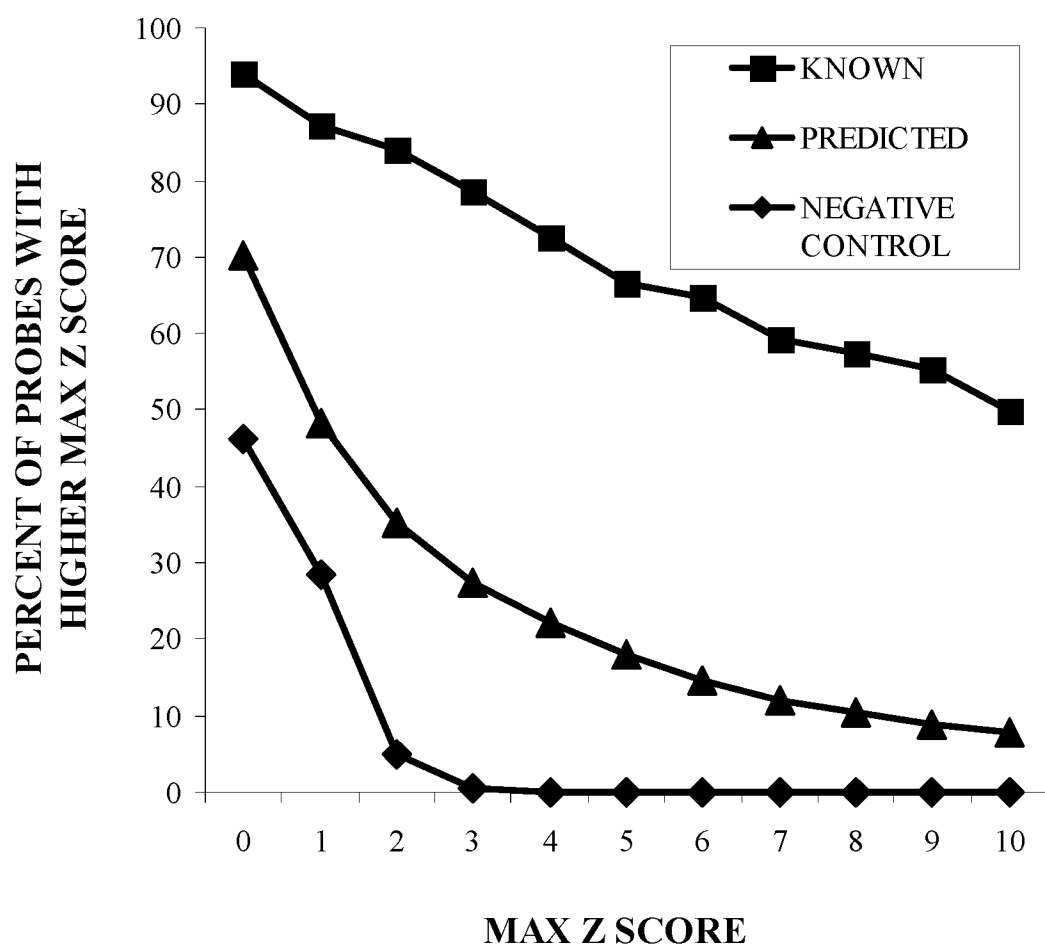


**FIG. 17C**





**FIG. 18A**



**FIG. 18B**

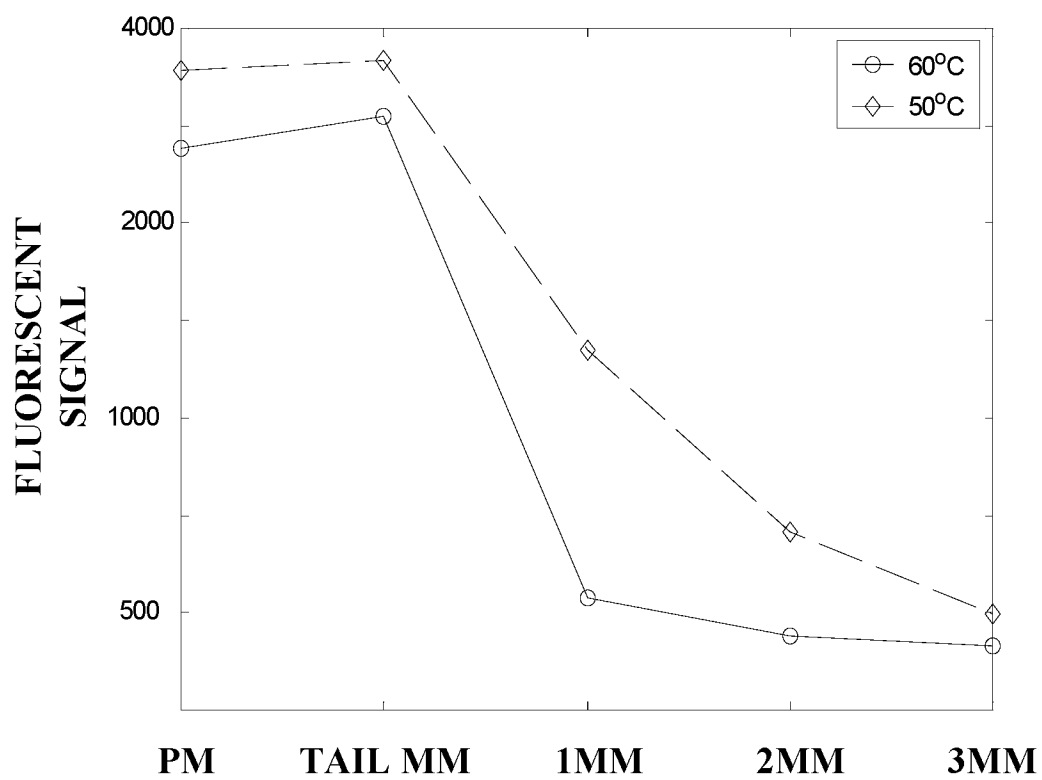


FIG. 18C

MIRNA NAME	HELA	BRAIN	LIVER	THYMUS	TESTES	PLACENTA	REFERENCE
HSA-MIR-124A	1879	<b>65517</b>	7025	3099	2672	2498	1,3
HSA-MIR-9	642	<b>42659</b>	3504	4455	4485	2313	2,3
HSA-MIR-128A	2015	<b>27701</b>	4940	4876	5166	2495	3
HSA-MIR-129	503	<b>22573</b>	1175	2213	5364	2017	3
HSA-MIR-128B	1168	<b>21969</b>	3954	4819	5383	2027	
HSA-MIR-122A	1051	447	<b>65518</b>	2644	617	570	1,3
HSA-MIR-194	501	910	<b>65518</b>	4737	2342	7952	3
HSA-MIR-148	413	620	<b>38436</b>	5250	6204	2711	
HSA-MIR-192	452	606	<b>20650</b>	1628	1263	2607	
HSA-MIR-96	887	3100	1477	<b>44800</b>	2266	5466	
HSA-MIR-150	648	1463	5295	<b>65518</b>	<b>29728</b>	5280	
HSA-MIR-205	551	615	1646	<b>65518</b>	2645	<b>39072</b>	
HSA-MIR-182	662	1944	1091	<b>25771</b>	2034	3683	
HSA-MIR-183	1026	1123	1286	<b>8754</b>	1681	2138	
HSA-MIR-204	525	3898	1757	6535	<b>64859</b>	6233	
HSA-MIR-10B	410	433	477	3871	<b>23083</b>	738	
HSA-MIR-154	438	733	1914	3309	<b>14750</b>	9637	
HSA-MIR-134	448	617	698	763	<b>2250</b>	997	
HSA-MIR-224	3233	11061	7684	<b>32305</b>	5377	<b>65518</b>	
HSA-MIR-210	844	2280	10703	6864	15288	<b>62452</b>	
HSA-MIR-221	625	9325	3520	<b>20212</b>	10608	<b>54287</b>	
HSA-MIR-141	696	805	1220	4063	2000	<b>46845</b>	
HSA-MIR-23A	1312	3492	2990	6021	11173	<b>40076</b>	
HSA-MIR-200C	556	595	1027	10636	1478	<b>33532</b>	
HSA-MIR-136	465	725	709	776	3100	<b>8840</b>	

1 LAGOS-QUINTANA ET AL., CURRENT BIOLOGY 12:735 (2002)  
2 KRICHEVSKY ET AL., RNA 9:1274 (2003)  
3 SEMPERE ET AL., GENOME BIOLOGY 5:R13 (2004)

FIG. 19A

5'UTR SEQUENCE (5' TO 3') OF HIV-1 (U5-R)

GGTCTCTCTGGTTAGACCAGATCTGAGCCTGGGAGCTCTCTGGCTAACT  
AGGGAACCCACTGCTTAAGCCTCAATAAAGCTTGCCTTGAGTGCTTCAAGTA  
GTGTGTGCCCGTCTGTTGTGTGACTCTGGTAACTAGAGATCCCTCAGACCCTT  
TTAGTCAGTGTGGAAAATCTCTAGCAGTGGCGCCCGAACAGGGACCTGAAAG  
CGAAAGGGAAACCAGAGGAGCTCTCTCGACGCAGGACTCGGCTTGCTGAA  
GCGCGCACGGCAAGAGGCGAGGGGCGGCGACTGGTGAGTACGCCAAAAA  
TTTTGACTAGCGGAGGCTAGAAGGAGAGAG

FIG. 19B

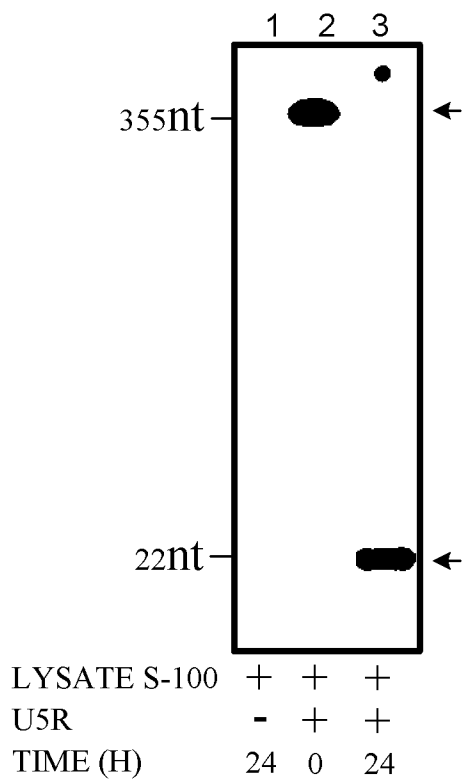
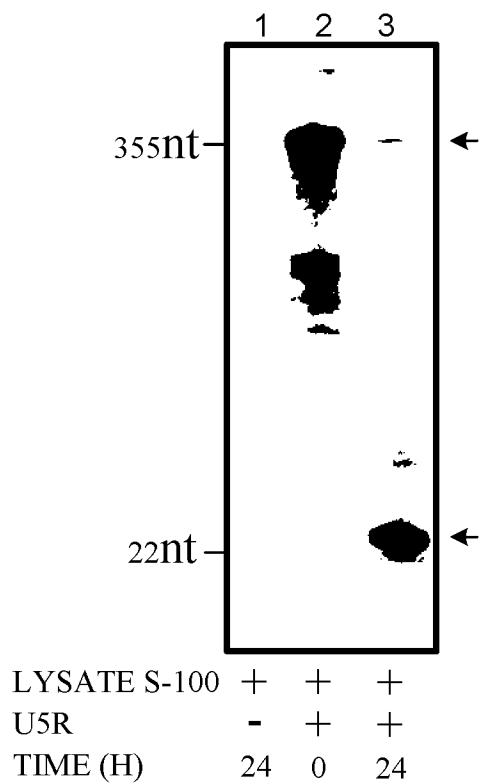
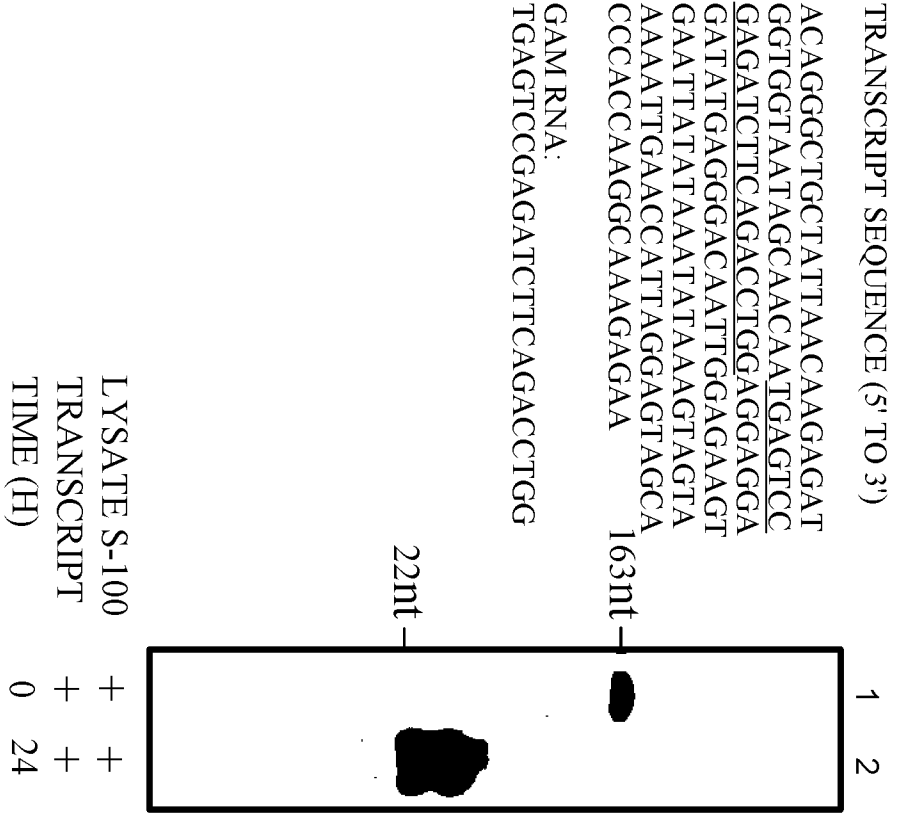


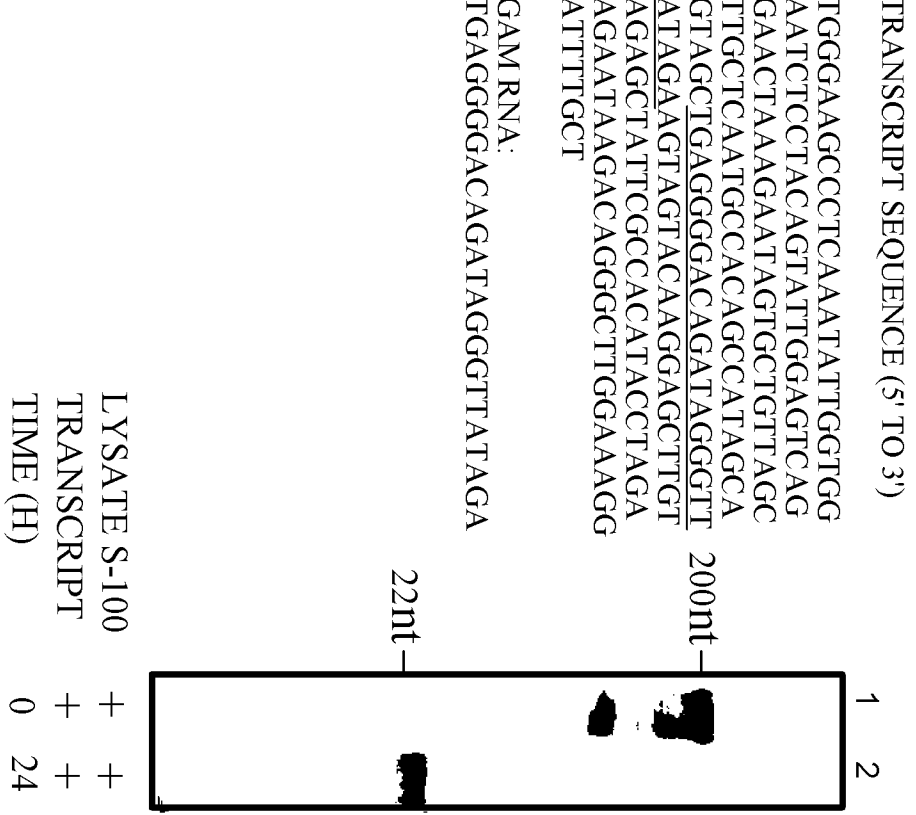
FIG. 19C



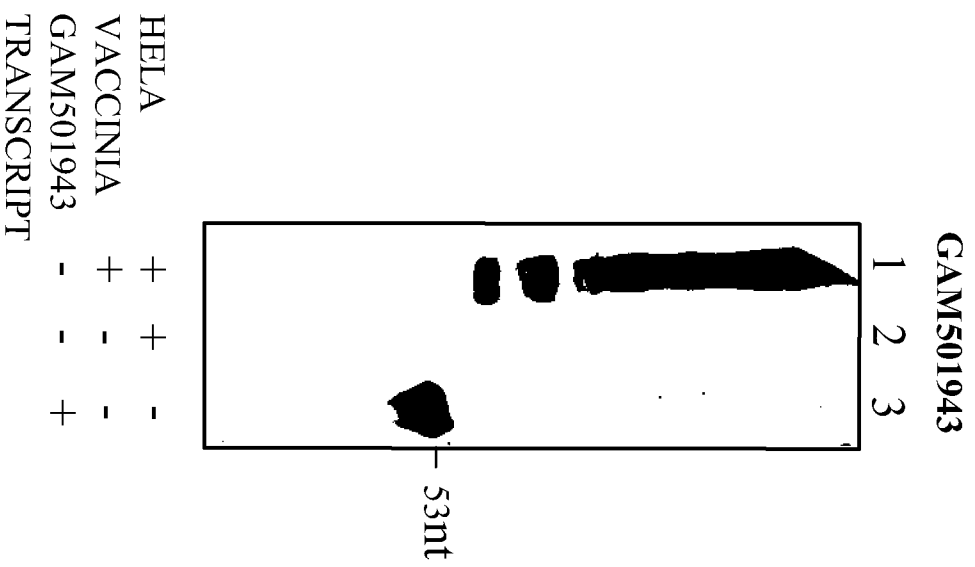
**FIG. 19D**



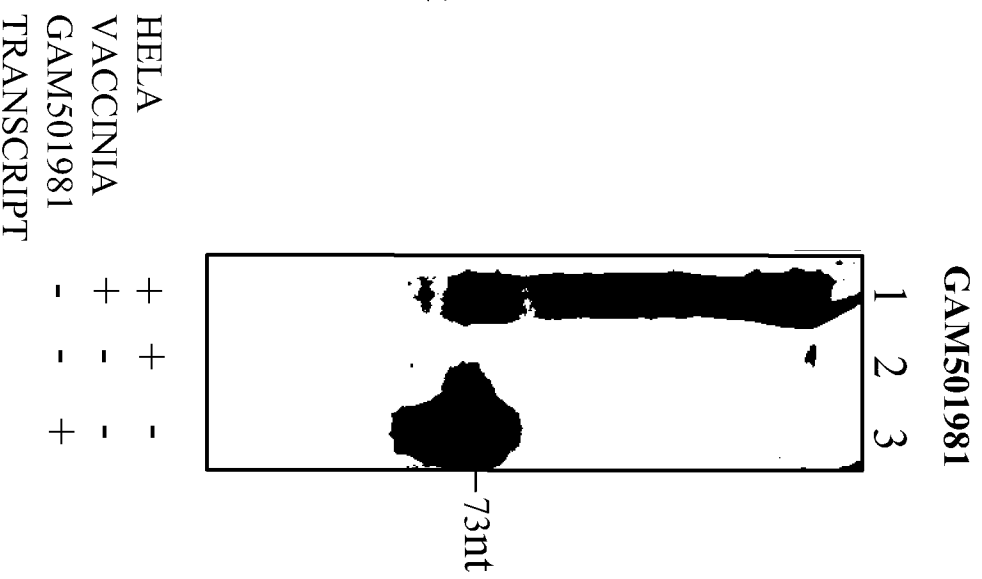
**FIG. 19E**



**FIG. 20A**



**FIG. 20B**



**FIG. 20C**

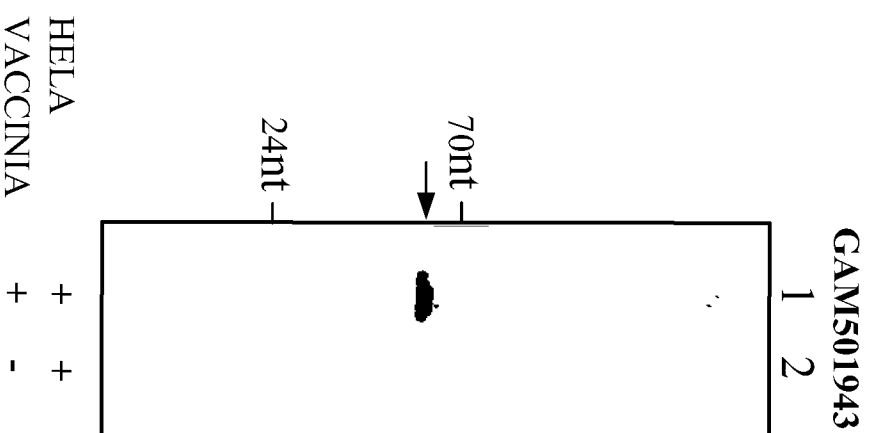
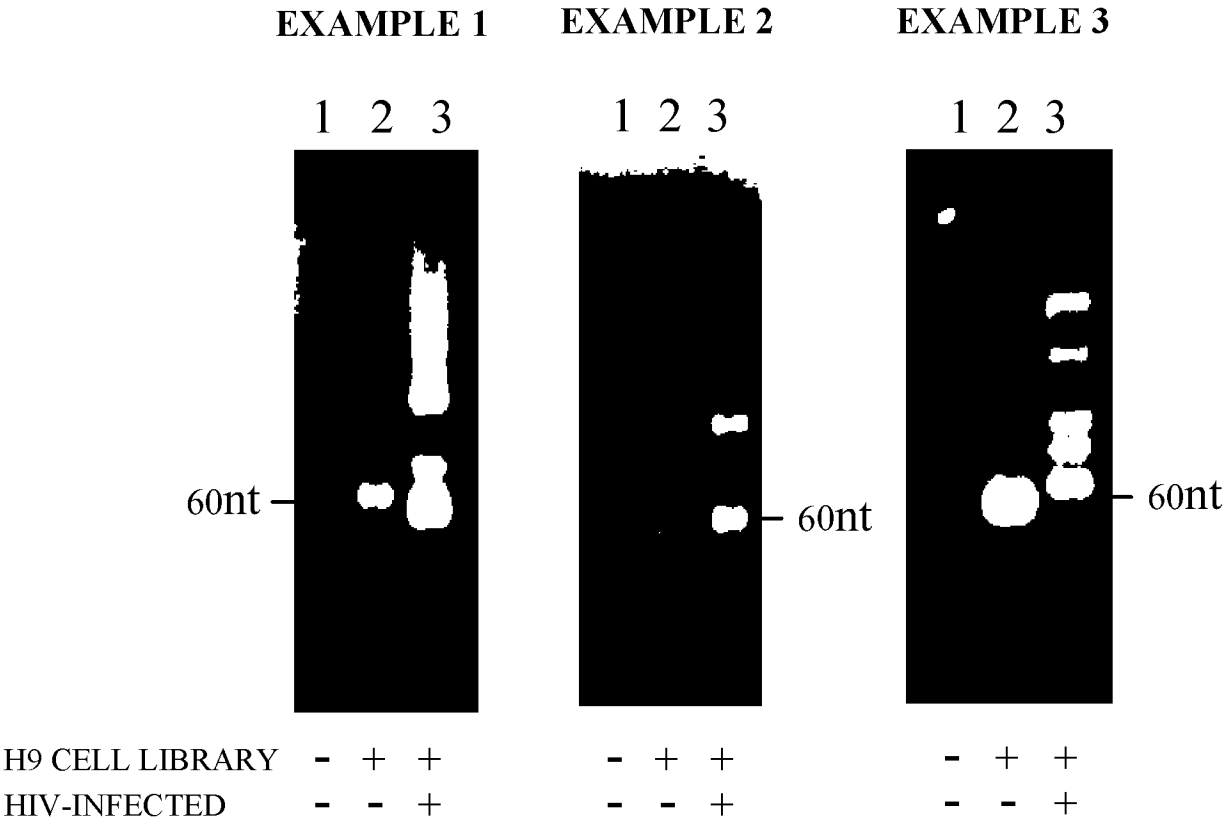


FIG. 21A



**FIG. 21B**

ROW	PRIMER SEQUENCE	SEQUENCED SEQUENCE	GAM RNA SEQUENCE	GAM PRECURSOR			
				SEQUENCE	CHR	STRAND	START OFFSET
1	GGAAGAAGAA T	GGAAGAAGAA GTGGGTGCA C	GGAAGAAGGA AAGTGGGT GCAC	GACACGTGGCAATGGGGAAAGGAAAGTGGGTGCAC TCAAGCTAGGCAGAGAAGTCAAGCTAGGCAGAGATGTGA ACTGGTTCAACTTCTGCATAGAGGAGAATGTAGGTC CTTCCATTTCTAATATAGATGTTT	11	+	6527398
2	GCAAGAGG CG	GCAAGAGGC GAGAAGCAG A	GCAAGAGT GAGAAGCA GA	CCCAGGTTCTGCAAGAGTGAGAAAGCAGAAAGCCCTA CTTGGCGTTGCCCTCTACCTGAGGAGAGAAGAACCCAGG TGTGCTCTCAGATGGTCGGGGTAGTGCTTGGG	20	+	10164522
3	GGAAGAAGAA T	GGAAGAAGAA TAATGTGAG	GGAAGAAGGA TAATGTGAG	ATTCTTCATGTTTGGCTAAAGAGACTCCAACTGCT TGGCCTCTTCTGAACTACTAATTAAAGAGGAAAGGA TAAATGTGAGGAGGCTAGTATGGACCTGTTACTCC GAATTCATCAAAATGGAGCTT	21	+	24398831
4	GGAAGAAGAA T	GGAAGAAGAA TAATGTGAA	GGAAGAAGAT AATGTGAA	GCTAGAGAGATTGAGACCGAGTGAAAGGCCACACCTC CGGAGGGAAAGAAATAAATGTGAAGGCTCTCTCCACTG ACATGTCACATGCTTCTTACTTGACTGGGCTTCCCT AAACTTGGGTAAATTTTCAGC	6	+	50974009
5	CTTTTGGC TG	CTTTTGGCT GGGCAGGC	CTTTTGGCA GGGCAGGG C	CTCTTCTAACCTTCAGTCCCTTTTTCAGAGGGCAGGGCT TACTCTAGGAAACTTAATTGCAAGGTAAAGTCAAGTCC TTAAGGTCCTGGCCACCTCAGAG	5	-	65170275
6	CTCTCTGG T	CTCTCTGGTT AGTACTTGG A	CTAGTCTGG TTAGTACTT GGA	AGGGTCTAGTCTGGTTAGTACTTGGATGAGAGACCA AATAGCAAAATACTTAAATGTCTTTTCTAAGGAAT TAAATTGGCTCCT	11	+	88695685
7	GCAAGAGG CG	GCAAGAGGC GAGAAGCAG T	GCAGAGGC AGAAGCAG T	TCTTGCCTTGCACGTGTCATATAAATCTGCCCTGGCTTT CTGCCCTGACTGCACACTAAGAATCATGACACAGAAA GCAGAGGCAGAAAGCAGTGAATTGGTAAAGG	1	+	193722202
8	CTCTCTGG TTA	CTCTCTGGTT AGTAATAGG	CTCTCTGGA GAGTAATA GG	CTTTGAGAAAAAGAGGCTTGTTATATTCCACAGCATG AGATGATTAATTAGAAACACTTAATTTCTGTCTCTCT GGAGAGTAATAGGCAGAACCCCTTATCAGGG	2	-	240247210